

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Ameren Illinois Company	:				
d/b/a Ameren Illinois,	:				
Petitioner	:	Docket	No.	12-0244	on
	:	Rehearing			
Smart Grid Advanced Metering	:				
Infrastructure Deployment Plan	:				

**INITIAL BRIEF ON REHEARING OF THE STAFF
OF THE ILLINOIS COMMERCE COMMISSION**

KELLY A. ARMSTRONG
JESSICA L. CARDONI
JOHN L. SAGONE
Office of General Counsel
Illinois Commerce Commission
160 North LaSalle Street, Suite C-800
Chicago, IL 60601
Phone: (312) 793-2877
Fax: (312) 793-1556
karmstr@icc.illinois.gov
jcardoni@icc.illinois.gov
jsagone@icc.illinois.gov

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*Counsel for the Staff of the
Illinois Commerce Commission*

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Staff of the Illinois Commerce Commission (“Staff”), by and through its counsel, pursuant to Section 200.800 of the Rules of Practice (83 Ill. Adm. Code 200.800) of the Illinois Commerce Commission (“Commission”), respectfully submits its Initial Brief on Rehearing in the above-captioned matter.

I. INTRODUCTION AND STATEMENT OF THE CASE

A. Procedural History

On March 30, 2012, Ameren Illinois Company d/b/a Ameren Illinois (“Ameren” or “Company”) filed its Verified Petition for approval of its Smart Grid Advanced Metering Infrastructure (“AMI”) Deployment Plan (“AMI Plan”) pursuant to Section 16-108.6 of the Illinois Public Utilities Act (“Act”) along with supporting Direct Testimony. (220 ILCS 5/16-108.6) Comverge, Inc. (“Comverge”), the Citizens Utility Board and Environmental Law and Policy Center (collectively, “CUB/ELPC”), and the People of the State of Illinois

(“AG”) intervened in the matter and filed testimony. An evidentiary hearing was conducted on April 26, 2012 before two Administrative Law Judges (“ALJs”).

The Commission issued an Order denying Ameren’s Petition on May 29, 2012, finding that it could not conclude that the Plan “complies with the requirement that such plan will be cost beneficial as defined in Section 16-108.6(a) of the Act.” (Order, May 29, 2012, p. 59) On June 28, 2012, Ameren filed a Petition for Rehearing as well as Direct Testimony on Rehearing asking the Commission to approve a Revised AMI Plan (“Revised Plan”) which addressed the Commission’s “concerns regarding the Plan’s cost-benefit analysis.” (Petition for Rehearing, p. 4) On July 12, 2012, the Commission granted Ameren’s Petition for Rehearing. Staff, Comverge, CUB/ELPC and the AG filed Direct Testimony on Rehearing on August 24, 2012. Ameren filed Rebuttal Testimony on Rehearing on September 11, 2012.

An evidentiary hearing was convened on September 20, 2012, wherein the following individuals testified: Mr. James M. Mazurek, Mr. Ryan W. Ellen, Mr. James Blessing, Mr. William Davis, Mr. Craig D. Nelson, Mr. Leonard Jones, Mr. Michael S. Abba and Dr. Ahmad Faruqui on behalf of the Company; Mr. Colin Meehan and Mr. Christopher C. Thomas on behalf of CUB/ELPC; Mr. James R. Hornby on behalf of the AG; Mr. Frank Lacey on behalf of Comverge; and Drs. Eric Schlaf and David Brightwell on behalf of Staff. This Initial Brief on Rehearing follows.

B. Legal Framework and Standards

As described above, the issue in this Docket on Rehearing is whether Ameren’s Revised Plan will be cost-beneficial pursuant to Section 16-108.6(c) of the Act. This Section reads, in pertinent part:

After notice and hearing, the Commission shall, within 60 days of the filing of an AMI Plan, issue its order approving, or approving with modification, the AMI Plan if the Commission finds that the AMI Plan contains the information required in paragraphs (1) through (5) of this subsection (c) and further finds that the implementation of the AMI Plan will be cost-beneficial consistent with the principles established through the Illinois Smart Grid Collaborative, giving weight to the results of any Commission-approved pilot designed to examine the benefits and costs of AMI deployment. (220 ILCS 16/108.6(c))

Cost-beneficial is defined by Section 16-108.6(a) to mean:

...a determination that the benefits of a participating utility's Smart Grid AMI Deployment Plan exceed the costs of the Smart Grid AMI Deployment Plan...This standard is met if the present value of the total benefits of the Smart Grid AMI Deployment Plan exceeds the present value of the total costs of the Smart Grid AMI Deployment Plan. The total cost shall include all utility costs reasonably associated with the Smart Grid AMI Deployment Plan. The total benefits shall include the sum of avoided electricity costs, including avoided utility operational costs, avoided consumer power, capacity, and energy costs, and avoided societal costs associated with the production and consumption of electricity, as well as other societal benefits, including the greater integration of renewable and distributed power resources, reductions in the emissions of harmful pollutants and associated avoided health-related costs, other benefits associated with energy efficiency measures, demand-response activities, and the enabling of greater penetration of alternative fuel vehicles. (220 ILCS 16/108.6(a))

Ameren's Revised Plan includes detail about the deployment of AMI meters that the Commission found was lacking in the original Plan filing. (Staff Ex. 5.0, p. 2)

The Revised Plan also shortens the duration needed to deploy meters to 62% of its customers from 10 years to 8 years. (*Id.*) The cost-effectiveness analysis includes certain societal benefits that were not previously considered and corrects an error in the calculation of terminal benefits. (Ameren Ex 3.0RH, p. 3)

II. WHETHER IMPLEMENTATION OF THE AMEREN AMI PLAN WILL BE COST-BENEFICIAL

Staff witness Dr. David Brightwell examined several societal benefits that were addressed by Ameren witness Dr. Faruqui in Ameren's cost-benefit analysis: demand response, avoided carbon emissions, electric vehicles ("PEV"), and energy efficiency. (Staff Ex. 5.0, p. 3) Dr. Brightwell concluded that while Dr. Faruqui most likely overstates the benefits of AMI deployment, the Revised Plan is likely cost-beneficial. (*Id.*, p. 4)

Dr. Brightwell conducted a sensitivity analysis of Ameren's cost-benefit analysis in which he eliminated all benefits associated with energy efficiency, plug-in electric vehicle ("PEV") enhancement, and carbon reduction, while reducing the benefits associated with demand response by 50%. (*Id.*, p. 3) Dr. Brightwell characterized these assumptions as extreme and unfavorable to Ameren's Revised Plan. (*Id.*) Using these assumptions on societal benefits and Ameren's cost of capital (8.25%) as the discount rate, Dr. Brightwell found the benefits of the Revised Plan are slightly less than the costs (Benefit-to-Cost ratio = 0.97). If these same assumptions are made with the 3.6% discount rate Ameren assumed for the Revised Plan, Dr. Brightwell concludes that the Plan is cost-beneficial (Benefit-to-Cost ratio = 1.25). (*Id.*, pp. 3-4) Dr. Brightwell ultimately concluded that Ameren's Revised Plan probably contains enough additional societal benefits from AMI to justify a finding that the Revised Plan is cost-beneficial as defined in 16-108.6(a) of the PUA. (*Id.*, p. 8)

As part of Staff's analysis, Staff witness Dr. Eric Schlaf addressed the extent to which AMI could result in societal benefits associated with customer ownership of PEV. (Staff Ex. 4.0, p. 1) Section 16-108.6(a) of the Act allows Ameren to include PEV

associated benefits in the AMI cost-benefit analysis. (220 ILCS 5/16-108.6(a); Staff Ex. 4.0, p. 2) This is because PEV owners will likely charge their vehicles primarily during off-peak periods, when electric prices are typically lower than average. (Staff Ex. 4.0, p. 2) To save money compared to the flat rate, PEV owners will need to take service under a dynamic pricing rate, such as real-time pricing. (*Id.*) Therefore, one potential connection between PEVs and AMI as it relates to societal benefits is that AMI meters will incent customers to enroll in a dynamic pricing rate offered by Ameren and/or Retail Electric Suppliers. (*Id.*)

Dr. Schlaf describes an approach for determining PEV-related societal benefits based on this connection. Dr. Schlaf notes that a sizeable number of Ameren's customers already take advantage of dynamic pricing through the Power Smart Pricing ("PSP") program offered by Ameren. (*Id.*, pp. 2-3) Currently, participation in PSP requires an interval meter which costs PSP customers \$5 per month, whereas Ameren customers receiving an AMI meter would not be charged this fee. (*Id.*, p. 3) Therefore, one method for determining PEV related societal benefits is to calculate the cost-savings that would result from PEV owners that participate in RTP using an AMI meter, thus avoiding the \$5 fee (\$5 per month * 12 months by the estimated number of PEVs purchased/used by Ameren customers during the analysis period). (*Id.*, p. 4) For example, assuming that Ameren customers purchase on average 20,000 PEVs from 2012-2032, the resulting total of nominal societal benefits would be \$24 million (\$5 per month * 12 months * 20,000 * 20). (*Id.*)

In comparison, in his calculation of societal benefits, Ameren witness Dr. Faruqui attempts to estimate the number of PEVs that will be purchased by Ameren customers

by 2030, and associated cost savings, as a result of AMI. (Ameren Ex. 5.0RH, pp. 12-14) He then estimates net societal benefits of \$139 million over the benefit period based on a calculation of avoided gasoline costs from customers powering their vehicles primarily by electricity, less an offset due to increased electric generation. (*Id.*)

Dr. Schlaf points out that a significant issue with both his and Dr. Faruqui's approaches to calculating PEV related societal benefits resulting from AMI is the uncertainty in estimating the number of PEVs that are purchased by Ameren customers as a result of AMI deployment. (Staff Ex. 4.0, pp. 4-5) To date, PEV growth has been considerably slower than projected by Ameren and would need to rapidly accelerate to meet Ameren's projections by 2015. (*Id.*, p. 6) Further, while Dr. Schlaf does not discount an intuitive hypothetical mathematical relationship between the sale of PEVs and electricity prices, Dr. Schlaf points out that even Dr. Faruqui admits that this relationship is not supported by existing data. (*Id.*, p. 7) In short, Staff finds that Dr. Faruqui's methodology relies on projections of PEV sales that are inherently difficult to forecast at this early stage in PEV development as well as an untested relationship between PEV sales and electricity prices. (*Id.*, p. 9)

Overall, despite the speculative nature of some of Ameren's cost-benefit analysis, Staff finds the Revised AMI Plan is cost-beneficial as required by Section 16-108.6(c) of the Act.

III. CONCLUSION

Staff respectfully requests that the Illinois Commerce Commission approve Ameren's AMI Plan, consistent with Staff's recommendations in this docket.

Respectfully submitted,

KELLY A. ARMSTRONG
JESSICA L. CARDONI
JOHN L. SAGONE
Office of General Counsel
Illinois Commerce Commission
160 North LaSalle Street, Suite C-800
Chicago, IL 60601
Phone: (312) 793-2877
Fax: (312) 793-1556
karmstr@icc.illinois.gov
jcardoni@icc.illinois.gov
jsagone@icc.illinois.gov

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*Counsel for the Staff of the
Illinois Commerce Commission*